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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,072	12/31/2003	Shen-Kan Hsiung	TW-APA-0647	3222

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EXAMINER	
WONG, EDNA	

ART UNIT	PAPER NUMBER
1795	

NOTIFICATION DATE	DELIVERY MODE
02/14/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/750,072	HSIUNG ET AL.	
	Examiner	Art Unit	
	EDNA WONG	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 January 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 3-5* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 3-5* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

This is in response to the Amendment dated January 15, 2008. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office Action.

Response to Arguments

Drawings

The drawings have been objected to.

The objection of the drawings has been withdrawn in view of Applicants' amendment.

Specification

I. The abstract of the disclosure has been objected to.

The objection of the abstract of the disclosure has been withdrawn in view of Applicants' amendment.

II. The disclosure has been objected to because of minor informalities.

The objection of the disclosure has been withdrawn in view of Applicants' amendment.

Claim Objections

Claims **1 and 2** have been objected to because of minor informalities.

The objection of claims 1 and 2 has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 112

Claims **1-5** have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The rejection of claims 1-5 under 35 U.S.C. 112, second paragraph, has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 102/103

Claims **1 and 3-4** have been rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over **Pan et al.** ("Using Polypyrrole as the Contrast pH Detector to Fabricate a Whole Solid-State pH Sensing Device", *IEEE Sensors Journal*, Vol. 3, No. 2, April 2003, pp. 164-170).

The rejection of claims 1 and 3-4 under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Pan et al. has been withdrawn in view of Applicants' amendment.

Claim Rejections - 35 USC § 103

I. Claims **2 and 5** have been rejected under 35 U.S.C. 103(a) as being

unpatentable over **Pan et al.** ("Using Polypyrrole as the Contrast pH Detector to Fabricate a Whole Solid-State pH Sensing Device", *IEEE Sensors Journal*, Vol. 3, No. 2, April 2003, pp. 164-170) as applied to claims 1 and 3-4 above, and further in view of **Peacock et al.** (US Patent No. 5,508,809) and **Gray et al.** (US Patent No. 3,929,609).

The rejection of claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over Pan et al. as applied to claims 1 and 3-4 above, and further in view of Peacock et al. and Gray et al. has been withdrawn in view of Applicants' amendment.

II. Claims **1 and 3-4** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 2590004** ('004) in combination with **Zier et al.** (US Patent No. 4,919,141).

The rejection of claims 1 and 3-4 under 35 U.S.C. 103(a) as being unpatentable over JP 2590004 ('004) in combination with Zier et al. has been withdrawn in view of Applicants' amendment.

III. Claims **2 and 5** have been rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 2590004** ('004) in combination with **Zier et al.** (US Patent No. 4,919,141) as applied to claims 1 and 3-4 above, and further in view of **Koopal et al.** (US Patent No. 5,422,246) and **Gray et al.** (US Patent No. 3,929,609).

The rejection of claims 2 and 5 under 35 U.S.C. 103(a) as being unpatentable over JP 2590004 ('004) in combination with Zier et al. as applied to claims 1 and 3-4

above, and further in view of Koopal et al. and Gray et al. has been withdrawn in view of Applicants' amendment.

Response to Amendment

Drawings

The drawings were received on January 15, 2008. These drawings are acceptable.

Claim Objections

Claims **1 and 5** are objected to because of the following informalities:

Claim 1

· line 7, it is suggested that the word -- a -- be inserted after the word "fixing".

· line 9, the words "electro polymerizing" should be amended to the word -- electro-polymerizing -- (hyphenated).

· line 9, the word "a" should be amended to the word -- an --.

· line 17, the word -- and -- should be inserted after the word "electrolytes,".

Claim 5

line 3, the word -- and -- should be inserted after the word "salts,".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

I. Claims **1 and 3-5** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 1

line 6, recites "positioning the device".

Applicants' specification, pages 1-23, does not disclose positioning the device. Thus, there is insufficient written description to inform a skilled artisan that applicant was in possession of the claimed invention as a whole at the time the application was filed.

The Examiner has carefully considered the entire specification as originally filed, however, there is found no literal support in the specification for the newly added limitations in amended claim 1. Applicants have not provided the page number and line numbers from the specification as to where the newly added limitations are coming

from. *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983) *aff'd mem.* 738 F.2d 453 (Fed. Cir. 1984).

II. Claims **1 and 3-5** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1

· line 2, "the contrast pH detector" lacks antecedent basis.

· line 6, recites "positioning the device". It is unclear how the device is positioned in step 3 when the device is not fabricated until step 5 (claim 1, lines 10-11).

· line 9, recites "immersing the device into a electro polymerizing solution". It is unclear how the device is immersed into the electro polymerizing solution in step 5 (claim 1, line 9) when the device is not fabricated until step 5 (claim 1, lines 10-11).

· lines 9-10, recite "electro-polymerizing by using polypyrrole". This is unclear how the electro-polymerizing uses polypyrrole because there is no use of polypyrrole in the step of electro-polymerizing. The step of electro-polymerizing uses an electro-polymerizing solution comprising a buffer solution, electrolytes and *the monomer* of polypyrrole (step C: claim 1, lines 16-17).

· lines 9-10, recite "electro-polymerizing by using polypyrrole".

line 12, recites "electro-polymerizing polypyrrole".

line 22, recites "polypyrrole polymerized".

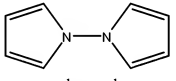
Claim 5, lines 3 and 5, recites "polypyrrole".

It is unclear what is the starting material in Applicants' electropolymerizing solution that the Applicants' are polymerizing. Is it:

(a) a pyrrole (monomer):

pyrrole or

(b) a polypyrrole (polymer):



polypyrrole or

(c) both?

· line 12, "the step of electro-polymerizing polypyrrole" lacks antecedent basis. The step of electro-polymerizing polypyrrole (*making* polypyrrole) is not the same as the step of electro-polymerizing by using polypyrrole (*using* polypyrrole) recited in claim 1, lines 9-10.

· line 12, recites "the step of electro-polymerizing polypyrrole *further comprises*". It is unclear what the step of electro-polymerizing polypyrrole was previously comprised of.

· line 20, recites "*immersing the substrate* into said electro-polymerizing solution". Claim 1, line 9, recites "*immersing the device* into a electro polymerizing solution". It is unclear what is immersed into the electro-polymerizing solution.

· line 22, recites "a polypyrrole *sensor*". Is this the same as the whole solid-state pH *sensing device* recited in claim 1, lines 10-11? If it is not, then what is the difference/ relationship between the polypyrrole sensor and the whole solid-state pH sensing device.

· line 25, it appears that "said sensing device" is further limiting the polypyrrole sensor (from claim 1, line 23) or the whole solid-state pH sensing device (from claim 1, lines 10-11). However it is unclear which one it is.

· lines 25-26, recites "thus completing fabrication of the polypyrrole sensor". However, claim 1, lines 10-11, recites "thus completing the fabrication of the whole solid-state pH sensing device". It is unclear what is being completed.

Claim 5

· lines 2-3, "said polymerizing solution of the polypyrrole" lacks antecedent basis. Is this the same as the electro-polymerizing solution recited in claim 1, lines 16-17?

· line 3, the word -- further -- should be inserted after the word "polypyrrole" (first occurrence). Claim 1, line 16, already recites that "said electro-polymerizing solution, *which comprises*".

· line 3, it appears that "a buffer solution" is the same as the buffer solution recited in claim 1, lines 16-17. However, it is unclear if it is. If it is, then it is suggested that the word "a" be amended to the word -- the --.

· line 3, recites "polypyrrole". Claim 1, line 17, recites "the monomer of polypyrrole". Is it correct that the monomer of polypyrrole and polypyrrole are both in the electropolymerizing solution? Or is the monomer of polypyrrole electropolymerized to polypyrrole?

· lines 4-5, "the polymerizing solution comprising a phosphate solution, potassium chloride, and polypyrrole" lacks antecedent basis.

· line 5-6, recites "said polymerizing solution". Is this the same as the

polymerizing solution of the polypyrrole (from claim 5, lines 2-3) or the polymerizing solution (from claim 5, lines 3-4)?

· lines 7-8, recites "wherein the process is applied to fabricate a sensing electrode with appropriate sensitivity". Claim 1, lines 1-2, recites "A process for fabricating a whole solid-state pH sensing device by using polypyrrole as the contrast pH detector". It is unclear what the process is fabricating.

III. Claims **1 and 3-5** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

Claim 1

· line 6, recites "positioning the device". It is unclear what is the *structural relationship* between *the substrate* recited in steps 1 and 2 and *the device* recited in step 3.

· line 14, recites "preparing a finished conductive substrate". It is unclear what is the *structural relationship* between the finished conductive substrate (from claim 1, line 14), the whole solid-state pH sensing device (claim 1, line 1) and the selected appropriate substrate (from claim 1, lines 3-4).

Steps 1 and 2 (claim 1, lines 3-5) recites the substrate.

Step 5 (claim 1, lines 9-10) recites *immersing the device* into an electro-polymerizing solution.

Step D (claim 1, line 20), recites *immersing the (finished conductive) substrate* into said electro-polymerizing solution.

Is it unclear how the process steps all treat a different material that is not structurally related.

· lines 23-24, recites "immersing *a polypyrrole sensor* into de-ionized water to clean said polypyrrole sensor". The polypyrrole sensor does not further limit anything in steps 1-5 and steps A-D. Thus, it is unclear what is the structural relationship between the polypyrrole sensor and the substrate (from steps 1 and 2: claim 1, lines 3-5), the device (from steps 3 and 5: claim 1, lines 6 and 9) and the finished conductive substrate (col. 1, lines 14-22).

Claim Rejections - 35 USC § 103

Claims **1 and 3-5** are rejected under 35 U.S.C. 103(a) as being unpatentable over **JP 2590004** ('004) in combination with **Jasne** (US Patent No. 4,724,053), **Canham et al.** (US Patent Application Publication No. 2005/0266045 A1), **Zier et al.** (US Patent No. 4,919,141), **Koopal et al.** US Patent No. 5,422,246) and **Gray et al.** (US Patent No. 3,929,609).

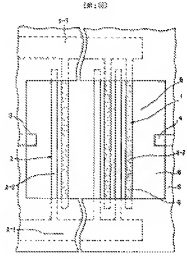
JP '004 teaches a process for fabricating a whole solid-state pH sensing device by using polypyrrole as the contrast pH detector, said process comprising the following steps:

step 1: selecting an appropriate substrate **6** (= a silicon substrate);

step 2: depositing a solid-state sensing material (= an oxide film) on said substrate **6**;

step 3: positioning the device **1-1, 2-1** (= lead parts);

step 4: using an insulating film **5** to seal the material and fixing the sensing window area **1, 2** (= the comb-form electrode is covered with oxidation-reduction



products of catalysis **9**; and Fig. 1:); and

step 5: then immersing the device into an electro-polymerizing solution (= the substrate is immersed in an aqueous solution of glucose oxidase and pyrrole), and electro-polymerizing by using polypyrrole **9** (= by which a polymerized pyrrole film containing the glucose oxidase is deposited), thus completing the fabrication of the

whole solid-state pH sensing device (abstracts; and Figs. 1-2), wherein

the step of electro-polymerizing polypyrrole comprises following steps:

step A: preparing a finished conductive substrate **6** (= steps 1-4 above prepares a solid-state sensing material/ oxide film/ silicon substrate);

step C: preparing said electro-polymerizing solution, which comprises the monomer of polypyrrole (= an aqueous solution of glucose oxidase and *pyrrole*); and

step D: connecting the substrate **6** to the positive electrode of the power supply and connecting an electrode to a negative electrode of the power supply, and immersing the substrate into said electro-polymerizing solution, where the power supply provides a constant potential in a manner that said polypyrrole can be polymerized on said substrate (= from the electrolytic polymerization by which a polymerized pyrrole film **9** containing the glucose oxidase is deposited; and Jasne: col. 8, line 59 to col. 10, line 9); and immersing the substrate into said electro-polymerizing solution (= the substrate is immersed in an aqueous solution of glucose oxidase and pyrrole), wherein the power supply provides a potential in a manner that said polypyrrole polymerized on said substrate (= from the electrolytic polymerization by which a polymerized pyrrole film **9** containing the glucose oxidase is deposited) [abstracts; and Figs. 1-2].

The solid-state substrate is selected from the group consisting of a silicon substrate, a glass substrate, a ceramic substrate and a plastic substrate (= a silicon

substrate) [abstracts].

The sensing material is selected from the group consisting of a tin dioxide membrane or other solid-state conductive ion-sensing membrane (= an oxide film) [abstracts].

The method of JP '004 differs from the instant invention because JP '004 does not disclose the following:

a. Preparing various solid-state substrates, as recited in claim 1.

JP '004 teaches a microelectrode cell comprising a silicon substrate (abstracts).

Like JP '004, Canham teaches a microelectrode device comprising a silicon substrate. Canham teaches that the microelectrode device may be *adapted for operation in or on the surface of a living human or animal body, or in vitro*. Commercial biomedical microelectrodes often use porous coatings to improve tissue integration and thereby lower interfacial impedance. Such porous coatings however need to remain conductive and have excellent corrosion resistance when under electrical bias. Underivatized porous silicon microelectrodes would undergo significant corrosion in most *physiological conditions* of pH greater than 7, e.g. soft tissue, bone, muscle and blood. The application of electrical bias to the electrodes, corresponding to a positive surface charge, would accelerate this degradation. The impedance would rise with time and the ac drift would also be unacceptable. Using derivatized porous silicon in the manufacture of microelectrode devices seeks to alleviate these problems (pages 3-4,

[0031] and [0032]).

Canham teaches preparing various solid-state substrates:

a biofiltration device comprising derivatized porous silicon (page 1, [0010]);

an immunoisolation device comprising derivatized porous silicon (page 1, [0013]);

a battery device comprising derivatized porous silicon (page , [0015]);

an optical device comprising derivatized porous silicon (page 1, [0020]); and

a cardiovascular device comprising derivatized porous silicon (page 1, [0028]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process described by JP '004 by preparing various solid-state substrates because preparing or derivatizing a porous silicon substrate in the manufacture of a microelectrode device would have alleviated significant corrosion in most physiological conditions as taught by Canham (pages 3-4, [0031] and [0032]).

Furthermore, the various substrates would have depended upon the intended use of the device, particularly to the environment to which the device will encounter, which would be most suited for the application of the device as taught by Canham (page 1, [0010] and [0013]; page 2, [0015] and [0020]; page 3, [0028]; and pages 3-4, [0031]

and [0032]).

b. Wherein *the selecting* of the appropriate substrate *is based on* the solid-state sensing material and a sensing environment, as recited in claim 1.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the selecting of the appropriate substrate described by JP '004 with wherein the selecting of the appropriate substrate is based on the solid-state sensing material and a sensing environment because the Applicant has a different reason for, or advantage resulting from doing what the prior art relied upon has suggested, it is noted that it is well settled that this is not demonstrative of nonobviousness. *In re Kronig* 190 USPQ 425, 428 (CCPA 1976); *In re Linter* 173 USPQ 560 (CCPA 1972); the prior art motivation or advantage may be different than that of Applicants while still supporting a conclusion of obviousness. *In re Wiseman* 201 USPQ 658 (CCPA 1979); *Ex parte Obiaya* 227 USPQ 58 (Bd. of App. 1985) and MPEP § 2144.

c. Wherein the insulating film comprises an epoxy resin, as recited in claim 1.

JP '004 teaches an insulating film **5** (abstracts; and Figs. 1-2).

Like JP '004, Zier teaches a sensing device. Zier teaches that the electrodes are embedded in an insulating epoxy resin filler **12** (col. 6, lines 61-66; and Figs. 1-3).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the insulating film described by JP '004 with wherein the insulating film comprises an epoxy resin because embedding electrodes in an insulating epoxy resin filler is a conventional construction of a sensing device as taught by Zier (col. 6, lines 61-66; and Figs. 1-3).

Furthermore, one having ordinary skill in the art would have known to isolate the electrodes from each other otherwise they would short circuit.

d. *Step B*: *cleaning* the substrate, as recited in claim 1

e. *Step E*: immersing a polypyrrole sensor into the de-ionized water *to clean* said polypyrrole sensor, as recited in claim 1.

Like JP '004, Gray teaches using a sensing device. Gray teaches that the electrodes were pretreated by immersing in a dichromate-sulfuric acid cleaning solution for several seconds and rinsing three times with doubly distilled water prior to immersion in the test solution (col. 6, lines 25-28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process described by JP '004 by cleaning the substrate immersing; and immersing a polypyrrole sensor into the de-ionized water to clean said polypyrrole sensor because rinsing three times with doubly distilled water prior to immersion in a test solution is a conventional rinse treatment of electrodes as taught by Gray (col. 6, lines 25-28).

f. Wherein in step C: said electro-polymerizing solution comprises a buffer solution and electrolytes, as recited in claim 1.

g. Wherein said polymerizing solution of the polypyrrole comprises a buffer solution, salts and polypyrrole;

the polymerizing solution comprising *a phosphate solution*, *potassium chloride* and *polypyrrole*;

wherein through changing the composition of said polymerizing solution, the control of the sensitivity of said polypyrrole sensor is achieved, and wherein the process is applied to fabricate a sensing electrode with an appropriate sensitivity and the control of the sensitivity of a differential pair of pH sensing device is obtained, as recited in claim 5.

JP '004 teaches an aqueous solution of glucose oxidase and pyrrole to effect an electrolytic polymerization (abstracts).

Like JP '004, Koopal teaches fabricating a sensing device. Koopal teaches that an aqueous solution containing 0.9% *potassium chloride* and 10 mM phosphate (*PBS*), together with 0.3 M *pyrrole* was used in the polymerization reaction (col. 12, lines 58-61).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the process described by JP '004 with wherein said polymerizing solution of the polypyrrole comprises a buffer solution, salts and polypyrrole; the polymerizing solution comprising a phosphate solution, potassium

chloride and polypyrrole because a solution comprising a phosphate solution, potassium chloride and polypyrrole would have been conventionally used as an electrolyte for electrodepositing a film of polypyrrole as taught by Koopal (col. 12, lines 58-61).

As to wherein through changing the composition of said polymerizing solution, *the control of the sensitivity* of said polypyrrole sensor is achieved, and wherein the process *is applied to fabricate* a sensing electrode with an appropriate sensitivity and the control of the sensitivity of a differential pair of pH sensing device *is obtained*, the reason or motivation to modify the reference (i.e., changing the composition) may often suggest what the inventor has done, but for a different purpose or to solve a different problem. It is not necessary that the prior art suggest the combination to achieve the same advantage or result discovered by the Applicants. *In re Linter* 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Dillon* 919 F.2d 688, 16 USPQ2d 1897 (Fed. Cir. 1990), *cert. denied*, 500 US 904 (1991); and MPEP § 2144.

h. Wherein the electrode connected to a negative electrode of the power supply is a platinum electrode, and where the power supply provides a constant potential which is higher than the oxidizing potential of said polypyrrole, as recited in claim 1.

Koopal teaches that a platinum plate acted as a counter electrode in the polymerization reaction (col. 12, lines 66-67).

As to where the power supply provides a constant potential which is higher than

the oxidizing potential of said polypyrrole, the monomer of polypyrrole in the electropolymerizing solution is pyrrole. Pyrrole has an oxidizing potential. A compound and all of its properties are inseparable. *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963) [MPEP § 2141.02(V)]. Thus, the oxidizing potential of pyrrole would have had the power supply provide a constant potential which is higher than the oxidizing potential of said polypyrrole, unless proven otherwise.

Furthermore, Jasne teaches that the reaction conditions of the electropolymerization will vary with the nature of the polymerizable monomer and the solvent. In the case of a preferred monomer (pyrrole) in a preferred solvent (water), electropolymerization can be initiated by *raising the potential* of the working electrode (against a silver/silver nitrate reference electrode) *to about +0.75 volt* or can be performed galvanostatically at a predetermined current density. The current or voltage can be increased or decreased or *be held at a fixed amperage or voltage* sufficient to permit initiation and completion of the desired electropolymerization (col. 8, line 59 to col. 9, line 2).

i. *Step F*: removing and drying said sensing device, thus completing the fabrication of the polypyrrole sensor, as recited in claim 1.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the method described by JP '004 by removing and drying said sensing device, thus completing the fabrication of the polypyrrole sensor

because after *Step E*: immersing a polypyrrole sensor *into the de-ionized water to clean* said polypyrrole sensor, one having ordinary skill in the art would have had the common sense to have removed and dried the polypyrrole sensor because (i) the polypyrrole sensor would not have been used while it was immersed into the de-ionized water and (ii) the polypyrrole sensor would not have been used while wet with the de-ionized water.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDNA WONG whose telephone number is (571) 272-1349. The examiner can normally be reached on Mon-Fri 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Edna Wong/
Primary Examiner
Art Unit 1795

EW
February 10, 2008